Satellite P50-A Detailed Product Specification[1]

Model Name	Description	Part Number	UPC
P50-ABT2N22	Windows 8 , Intel® Core™ i5-4200U Processor, 4GB DDR3L, 500GB 5400rpm SATA, DVD-SuperMulti, 15.6" widescreen FHD, , Wi-Fi® 802.11 b/g/n wireless LAN+ Bluetooth 4.0, 4-cell battery, 1 year standard limited warranty	PSPMJU-00J006	022265528419

Operating System [C1] [2]

- Windows 8 Pro; Windows 8
- Base unit preinstalled with Windows 8

Processor[3] and Graphics[4]

- Intel® Core™ i5-4200U Processor
  - (3M Cache,up to 2.60GHz)with Intel® Turbo Boost Technology 2
- Intel® Core™ i7-4700MQ Processor (optional)
  - (6M Cache, up to 3.40GHz) with Intel® Turbo Boost Technology 2
- Mobile Intel® HM86 Express Chipset (4700MQ only)
- Mobile Intel® HD graphics with shared graphics memory

Memory[5]

- 2 main memory slots. (16GB Max)
  - 4GB DDR3L 1600MHz = 4GB x 1
  - 4GB DDR3L 1600MHz = 2GB x 2
  - 6GB DDR3L 1600MHz = 4GB + 2GB (optional)
  - 8GB DDR3L 1600MHz = 4GB + 4GB (optional)
  - 16GB DDR3L 1600MHz = 4GBx4 (optional)

Storage Drive[6]

- 500GB (5400 RPM) Serial ATA hard disk drive
- 750GB (5400 RPM) Serial ATA hard disk drive (optional)
- 1TB(5400 RPM) Serial ATA hard disk drive(optional)
- 1TB (5400 RPM) Hybrid 8G Disk Drive (optional)
- TOSHIBA Hard Drive Impact Sensor (3D sensor)

Fixed Optical Disk Drive[7]

- DVD SuperMulti drive supporting 11 formats
  - Maximum Read speed and compatibility: CD-ROM (24x), CD-R (24x), CD-RW (16x), DVD-ROM (8x), DVD-R (8x), DVD-R DL (6x), DVD-RW (6x), DVD+R (8x), DVD+R DL (6x), DVD+RW (8x), DVD-RAM (5x)
- Blu-Ray Disc® (BD-ROM) and DVD SuperMulti drive supporting 12 formats[8] (optional)
  - Maximum speed and compatibility: CD-ROM (24x), CD-R (24x), CD-RW (16x), DVD-ROM (8x), DVD-R (8x), DVD-R DL (4x), DVD-RW (6x), DVD+R (8x), DVD+R DL (4x), DVD+RW (8x), DVD-RAM (5x), BD-ROM (6x)
- Blu-ray Disc® Rewriteable (BD-RE) supporting 16 formats[9](optional)
  - Maximum speed and compatibility: CD-ROM (24x), CD-R (24x), CD-RW (4x), DVD-ROM (8x), DVD-R (8x), DVD-R DL (4x), DVD-RW (6x), DVD+R (8x), DVD+R DL (4x), DVD+RW (8x), DVD-RAM (5x), BD-ROM (6x),BD-R (6x),BD-R DL (4x),BD-RE (2x), BD-RE DL (2x)

Display[10]

- 15.6" diagonal widescreen TruBrite® TFT LCD display at 1920 x 1080 native resolution (FHD)
  - Native support for 1080p content
  - 16:9 aspect ratio
  - LED backlit
- 15.6" diagonal widescreen TruBrite® TFT LCD display at 1920 x 1080 native resolution (FHD)
  - Touchscreen
  - Native support for 1080p content
  - 16:9 aspect ratio
  - LED backlit

Sound

- Built-in harman/kardon® stereo speakers
- DTS Studio Sound™

Input Devices

- Premium Frameless Raised Tile Keyboard with 10-Keypad (black)
  - LED Backlit
- Buttonless touchpad pointing device with multi-touch control
- One Touch Function Keys

Communications

- HD webcam and stereo microphone
- 10/100/1000 Ethernet
- Wi-Fi® Wireless networking (802.11b/g/n)[11] + Bluetooth 4.0
  - 150Mbps
- Wi-Fi® Wireless networking (802.11b/g/n)[12] + Bluetooth 4.0 (optional)
  - 300Mbps
- Intel® Centrino® Wireless-N 2230, 2x2 BGN + Bluetooth 4.0[13] (optional)
  - Available only with 4700MQ cpu
  - Supports Intel® Wireless Display Ready[14] (WiDi ready)
  - Wireless Adapter sold separately
- Intel® Wireless-N 7260, 2x2 BGN + Bluetooth 4.0[15] (optional)
  - Available only with 4200U cpu
  - Supports Intel® Wireless Display Ready[16] (WiDi ready)
  - Wireless Adapter sold separately
- Intel® Dual Band Wireless-AC 7260, 2x2 AC + Bluetooth 4.0[17] (optional)
  - Available only with 4200U cpu
  - Supports Intel® Wireless Display Ready[18] (WiDi ready)
  - Wireless Adapter sold separately

Expandability

- Memory Card Reader
  - Secure Digital, Secure Digital High Capacity, Secure Digital Extended Capacity, Mini SD, Micro SD, Multi Media Card [shared slot; may require adapter for use]

Ports

- Video
  - RGB (monitor) output port
  - HDMI®with 4K Ultra HD output capability
- Audio
  - Microphone input port with Toshiba Sleep and Music[19]
  - Headphone output port
- Data
  - 2 USB 3.0 ports[20] (1 with USB Sleep and Charge[21]) and 2 USB 2.0 ports
  - RJ-45 LAN port
- Security
  - Slot for Security Lock

Physical Description

- Prestige Silver in Brushed Aluminum
- Prestige Silver in Brushed Aluminum with Touch Screen(optional)
- Dimensions (W x D x H): 15.2" x 9.9" x 1.1"/1.2" (with feet)
- Weight: Starting at 5.3 lbs., depending upon configuration[22]

Power Supply

- 45W (19V 2.37A) 100-240V/50-60Hz AC Adapter
  - i5-4200U unit only
  - Weight: starting at 0.4 lbs
- 90W (19V 4.74A) 100-240V/50-60Hz AC Adapter
  - i7-4700MQ units only

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- Weight: starting at 0.75 lbs.

Battery[23]

- 4 cell/43Wh Lithium Ion battery pack

Software [C1] [24]

- Toshiba Software and Utilities
  - TOSHIBA App Place
  - TOSHIBA BookPlace™
  - TOSHIBA Desktop Assist
  - TOSHIBA Disc Creator
  - TOSHIBA Bluetooth Stack for Windows
  - TOSHIBA eco Utility™
  - TOSHIBA HDD Protection
  - TOSHIBA Media Player by sMedio Truelink+
  - TOSHIBA Maintenance Utility
  - TOSHIBA Recovery Disc Creator
  - TOSHIBA Service Station
  - TOSHIBA Sleep Utility
  - TOSHIBA Start
  - TOSHIBA Password Utility
  - TOSHIBA Resolution+ Upconvert Technology for Media Player[25]
  - TOSHIBA Video Player
- Third-party Software
  - Office Home & Student 2013[26] (optional)
  - Office Home & Business 2013[27](optional)
  - Office Professional 2013[28](optional)
  - Norton Internet Security™ 2013 (12-month subscription, if purchased at time of system configuration)
  - Internet Explorer® 10
  - Intel® Wireless Display[29] (for units with Intel wifi)
  - Norton™ PC Checkup
  - Origin powered by EA Game Console
  - WildTangent® Games Console
  - DTS Studio Sound™
- Special Offers and Trial Software
  - Norton™ Internet Security (30-day trial subscription)
  - 1 month trial for new Office 365 customers[30]
  - Norton™ Online Backup (30-day Trial)
  - Norton™ Anti-Theft (30-day Trial)

1 YEAR STANDARD LIMITED WARRANTY[31]
2 YEAR STANDARD LIMITED WARRANTY[32] (optional)
3 YEAR STANDARD LIMITED WARRANTY[33] (optional)

Environmental Specifications

- This product is RoHS[34] compatible
- ENERGY STAR® Qualified
- EPEAT® Gold Rated

	Operating	Non-operating
Temperature[35]	5° to 35° C	-20° to 60° C
Relative Humidity (non-condensing)	20% to 90%	10% to 95%
Thermal Gradient	15° C per hour (max)	20° C per hour (max)
Altitude (relative to sea level)	0 to 10,000 meters	-60 to 40,000 meters
Shock	10G	60G
Vibration	0.5G	1.0G

Service Upgrades and Extensions

Toshiba offers many different enhanced services such as SystemGuard®, On-Site Repair, and ServiceExpress to provide additional support to your notebook PC. For a full description and complete list of programs and program terms and conditions, please visit www.support.toshiba.com.

Accessories

For additional and most updated accessories, please visit www.accessories.toshiba.com

Power

Part Number	Description
PA5044U-1ACA	Toshiba 45W Global AC Adapter(19V, 2.37A), for units with i5-4200U cpu installed
PA5083U-1ACA	Toshiba 90W Global AC Adapter(19V, 4.74A), for units with i7-4700MQ cpu installed

Expansion

Part Number	Description
PA5082U-1PRP	dynadock V3.0 Universal USB 3.0 Docking Station
PA3927U-1PRP	dynadock U3.0 Universal USB 3.0 Docking Station

Bluetooth/Wireless

Part Number	Description
PA3847U-1ETB	Toshiba Bluetooth Laser Mouse, Gloss Black
PA3847U-1ETC	Toshiba Bluetooth Laser Mouse, Magnesium Black

Carrying Case

Part Number	Description
PA1463U-1SP6	Toshiba 16" Metropolitan Carrying Case (Fits up to 16")
PA1452U-1BS6	Toshiba 16" Extreme Back Pack, Black&Blue(Fits up to 16")
PA1448U-1RS6	Toshiba 16" Envoy Roller Case (Fits up to 16")

Subject to Change

While Toshiba has made every effort at the time of publication to ensure the accuracy of the information provided herein, product specifications, configurations, prices, system/component/options availability are all subject to change without notice. For the most up-to-date product information about your computer, or to stay current with the various computer software or hardware options, visit Toshiba's Web site at http://www.support.toshiba.com

Return Policy

Notwithstanding anything to the contrary in any third party License Agreement or product documentation supplied with your PC, Toshiba America Information Systems, Inc. ("TAIS") does not accept the return of component parts, or bundled software, that have been removed from the PC system. Pro-rata refunds on individual PC components or bundled software, including the operating system, will not be granted. If you wish to return a complete PC system, contact the TAIS dealer where you purchased the product, and comply with the dealer's standard return policies and procedures.

Toshiba America Information Systems, Incorporated ("TAIS")
9740 Irvine Boulevard
Irvine CA 92618

ToshibaDirect website: http://www.toshibadirect.com
TAIS website for resellers: http://sell.toshiba.com
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[C1] **64-bit computing:**

64-bit computing requires that the following hardware and software requirements are met:

- 64-bit Operating System
- 64-bit CPU, Chipset and BIOS (Basic Input/Output System)
- 64-bit Device drivers
- 64-bit applications

Certain device drivers and/or applications may not be compatible with a 64-bit CPU and therefore may not function properly. See "Detailed Specs" for more information.

[1] **Product Series Legal Footnote**. The product specifications and configuration information are designed for a product Series. Your particular model may not have all the features and specifications listed or illustrated. For more detailed information about the features and specifications on your particular model, please visit Toshiba's Web site at pcsupport.toshiba.com.

Product Offering Legal Footnote. Toshiba America Information Systems, Inc. reserves the right to modify or withdraw this offer at anytime without notice

[2] **Operating System**. Also see ***64-Bit Computing*** Legal Footnote, if applicable.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

Offers. Offer terms, duration and product availability all subject to change without notice

[3] **Processor (Central Processing Unit)**. Also see ***64-Bit Computing*** Legal Footnote, if applicable.

CPU performance in your computer product may vary from specifications under the following conditions:

1. use of certain external peripheral products
2. use of battery power instead of AC power
3. use of certain multimedia, computer generated graphics or video applications
4. use of standard telephone lines or low speed network connections
5. use of complex modeling software, such as high end computer aided design applications
6. use of several applications or functionalities simultaneously
7. use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
8. use of computer at temperatures outside the range of 5°C to 30°C (41°F to 86° F) or >25°C (77°F) at high altitude (all temperature references are approximate and may vary depending on the specific computer model – please visit the Toshiba website at www.pcsupport.toshiba.com for details).

CPU performance may also vary from specifications due to design configuration.

Under some conditions, your computer product may automatically shut-down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. Use your computer product only under recommended conditions. Read additional restrictions under "Environmental Conditions" in your product "Detailed Specs." Contact Toshiba Technical Service and Support for more information.

[4] **Graphics (Graphics Processing Unit)**. GPU performance may vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and may decrease considerably when operating in battery power mode.

Total Optional Graphics Memory is the total of, as applicable, Dedicated Video Memory, System Video Memory and Shared System Memory. Shared System Memory will vary depending on system memory size and other factors.

[5] **Memory (Main System)**. Part of the main system memory may be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics may vary depending on the graphics system, applications utilized, system memory size and other factors. Computers configured with a 32-bit operating system can address up to 3GB of system memory. Only computers configured with a 64-bit operating system can address 4 GB or more of system memory.

[6] **Storage Drive (Internal HDD Capacity)**. One Gigabyte (GB) means 109 = 1,000,000,000 bytes and One Terabyte (TB) means 1012 = 1,000,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 230 = 1,073,741,824 bytes and 1TB = 240 = 1,099,511,627,776 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the computer includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

[7] **Optical Drive**. Due to manufacturing and quality variations in third party optical media (e.g., CD or DVD) or optical media players/recorders, in certain cases, your Toshiba optical drive may not record on certain optical media that bear the applicable logo, or playback optical media recorded by other PCs or optical media recorders. Additionally, certain optical media recorded on your optical drive may not playback or operate properly on other PCs or optical media players. These problems are not due to any defect in your Toshiba PC or optical drive. Please refer to your PC's product specification for listing of specific format compatibilities.

Recording or viewing of certain optical media may be limited or prevented in accordance with applicable copy protection standards.

[8] **Blu-Ray Disc™ Player Technology.** Compatibility and/or performance issues are possible. Certain interactive features may not be supported due to compatibility, network settings or other conditions. Advanced Access Content System (AACS) keys are integrated into your computer for copy protection purposes. Occasional renewal is required and will initially be provided at no charge. After the initial period, Corel Corporation will provide AACS key renewals pursuant to its then current terms and conditions. For more information on AACS key, visit www.aacsla.com/home. Depending on Blu-ray Disc content, you may experience "frame dropping" or lower performance. Viewing on external

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display requires a RGB/HDCP supported HDMI port. External power required for viewing of Blu-ray content. Dual view feature not supported. You must close all other applications during Blu-ray Disc playback.

[9] **Blu-Ray Disc™ Player Technology**. Compatibility and/or performance issues are possible. Certain interactive features may not be supported due to compatibility, network settings or other conditions. Advanced Access Content System (AACS) keys are integrated into your computer for copy protection purposes. Occasional renewal is required and will initially be provided at no charge. After the initial period, Corel Corporation will provide AACS key renewals pursuant to its then current terms and conditions. For more information on AACS key, visit www.aacsla.com/home.

Depending on Blu-ray Disc content, you may experience "frame dropping" or lower performance. Viewing on external display requires a RGB/HDCP supported HDMI port. External power required for viewing of Blu-ray content. Dual view feature not supported. You must close all other applications during Blu-ray Disc playback.
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[10] **Display**. Small bright dots may appear on your screen display when you turn on your PC. Your display contains an extremely large number of thin-film transistors (TFT) and is manufactured using high-precision technology. Any small bright dots that may appear on your display are an intrinsic characteristic of the TFT manufacturing technology. Over a period of time, and depending on the usage of the computer, the brightness of the screen will deteriorate. This is also an intrinsic characteristic of the screen technology. When the computer is operated on battery power, the screen with dim and you may not be able to increase the brightness of the screen while on battery power.

[11] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported.

[12] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported.

[13] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported..

[14] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[15] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported..

[16] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[17] **Wireless** May require purchase of additional software, external hardware, or services. Transmission speeds may vary. Certain optional features within the wireless-n specifications (if available on your system) may not be supported..

[18] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[19] **Sleep & Music:** In this mode, the headphone jack and mute functions are disabled. The volume and sound quality will diminish as the speakers not tuned in Windows® mode. Use the volume control on your audio device to adjust sound. Audio line-in cable is not included

[20] **USB 3.0.** 5Gbps is the maximum theoretical interface transfer rate per the specifications of the Universal Serial Bus 3.0. Actual transfer rate will vary depending on your system configuration and other factors.

[21] **USB Sleep & Charge.** The "USB Sleep & Charge function" may not work with certain external devices even if they are compliant with the USB specification. In those cases, turn the power of the computer ON to charge the device.

[22] **Weight**. Weight may vary depending on product configuration, vendor components, manufacturing variability and options selected.

[23] **Battery Life Rating**.
Measured by MobileMark® 2012 for models preinstalled with Microsoft® Windows 8.

- Benchmark rules for Mobile Mark™ 2012: Wireless connectivity = On, Screen brightness = 150nits, Predefined updated workloads.

Details of MobileMark® 2012 testing protocols are available at **www.bapco.com** MobileMark is a trademark of the Business Applications Performance Corporation.

Rating is for comparison purposes only, and does not indicate the battery life that will be obtained by any individual user. Actual battery life may vary considerably from specifications depending on product model, configuration, applications, power management settings and features utilized, as well as the natural performance variations produced by the design of individual components. The battery life rating is only achieved on the select models and configurations tested by Toshiba under the specific test settings at the time of publication and is not an estimate of a system's battery life under any conditions other than the specific test settings.

After a period of time, the battery will lose its ability to perform at maximum capacity and will need to be replaced. This is normal for all batteries.

[24] **Software**. Also see 64-Bit Computing Legal Footnote, if applicable.

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

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[25] **Upconverter/UpconversionTechnology (Resolution+® Technology).** Viewing enhancements may vary depending upon content quality and display device capability/functionality/settings. Depending on the quality of the content, some video noise may be visible.

[26] **Microsoft® Officetrial** Buy Microsoft® Office to use full-featured Office software on this PC.

Microsoft® Software (if included in your PC; e.g., Microsoft Home and Student 2013 or 365, Microsoft Office Home and Business 2013 or 365, Microsoft Office Professional 2013 or 365)

The version of Microsoft® Office included in this computer is only available in and can only be activated within the region in which you purchased it.
Certain Microsoft® software products included with this computer may use technological measures for copy protection. In such case, you will not be able to use the Product if you do not activate it with Microsoft. Activation may be completed by Internet or telephone (toll charges may apply). Product Activation procedures and Microsoft's privacy policy will be detailed during initial launch of the Product, or upon certain reinstallations of the software products or reconfiguration of the computer.

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[29] **Intel® Wireless Display.** Copy protection technology, if any, associated with the content may prevent or limit viewing of content.

[30] **Microsoft® Officetrial** Buy Microsoft® Office to use full-featured Office software on this PC.

Microsoft® Software (if included in your PC; e.g., Microsoft Home and Student 2010 or 365, Microsoft Office Home and Business 2010 or 365, Microsoft Office Professional 2010 or 365)

The version of Microsoft® Office included in this computer is only available in and can only be activated within the region in which you purchased it.
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[31] **Warranty.** The terms and conditions of Toshiba's standard limited warranty are available at www.warranty.toshiba.com.

[32] **Warranty.** The terms and conditions of Toshiba's standard limited warranty are available at www.warranty.toshiba.com.

[33] **Warranty.** The terms and conditions of Toshiba's standard limited warranty are available at www.warranty.toshiba.com.

[34] **RoHS.** This notebook is compatible with European Union Directive 2011/65/EU, Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (RoHS), which restricts use of lead, cadmium, mercury, hexavalent chromium, PBB, and PBDE. Toshiba requires its notebook component suppliers to meet RoHS requirements and verifies its suppliers' commitment to meeting RoHS requirements by conducting component sampling inspections during the product design approval process.

[35] **Temperature (Environmental) Conditions**. All temperature references are approximate and the performance of your computer may vary from specifications even when operating within the recommended temperature range.

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